

## EAST Search History

| Ref # | Hits   | Search Query  | DBs                    | Default Operator | Plurals | Time Stamp       |
|-------|--------|---|------------------------|------------------|---------|------------------|
| L1    | 659448 | (muffle\$1 manifold) with (heat\$3) same ((thermocouple thermometer thermistor) or ((temperature) with (sens\$3 detect\$3 monitor\$3 control\$4)))                                      | US-PGPUB; USPAT; USOCR | OR               | OFF     | 2007/03/15 08:01 |
| L2    | 4758   | ((muffle\$1 manifold) with (heat\$3)) same ((thermocouple thermometer thermistor) or ((temperature) with (sens\$3 detect\$3 monitor\$3 control\$4)))                                    | US-PGPUB; USPAT; USOCR | OR               | OFF     | 2007/03/15 08:02 |
| L3    | 731    | ((muffle\$1 manifold) with (heat\$3)) same ((thermocouple thermometer thermistor) or ((temperature) with (sens\$3 detect\$3 monitor\$3 control\$4))) same (wafer semiconductor circuit) | US-PGPUB; USPAT; USOCR | OR               | OFF     | 2007/03/15 08:23 |
| L4    | 45     | 156/345.17  | US-PGPUB; USPAT; USOCR | OR               | OFF     | 2007/03/15 08:19 |
| L5    | 14     | (156/345.17 156/345.21) and (heat\$3 same ((thermocouple thermometer thermistor) or ((temperature) with (sens\$3 detect\$3 monitor\$3 control\$4))))                                    | US-PGPUB; USPAT; USOCR | OR               | OFF     | 2007/03/15 08:21 |
| L6    | 80     | ((muffle\$1 manifold) with (heat\$3)) same ((thermocouple thermometer thermistor) or ((temperature) with (sens\$3 detect\$3 monitor\$3 control\$4))) same (wafer semiconductor circuit) | EPO; JPO; DERWENT      | OR               | OFF     | 2007/03/15 08:29 |
| L7    | 0      | "9916109" and meniscus  | EPO; JPO; DERWENT      | OR               | OFF     | 2007/03/15 08:29 |
| L8    | 5      | "9916109"   | EPO; JPO; DERWENT      | OR               | OFF     | 2007/03/15 08:29 |
| S1    | 798    | "proximity head"  | US-PGPUB; USPAT        | OR               | OFF     | 2006/05/15 14:17 |
| S2    | 183    | S1 and (wafer semiconductor substrate)  | US-PGPUB; USPAT        | OR               | OFF     | 2006/05/15 13:59 |
| S3    | 9      | ("proximity head" same heat\$3)and (wafer semiconductor substrate)  | US-PGPUB; USPAT        | OR               | OFF     | 2006/05/15 12:15 |
| S4    | 8      | ("3128158"   "4294021"   "4736529"   "5423248").PN. OR ("5553394").URPN.  | US-PGPUB; USPAT; USOCR | OR               | OFF     | 2006/05/15 12:20 |
| S5    | 20     | (mikhaylichenko delarios).in.   | US-PGPUB; USPAT; USOCR | OR               | OFF     | 2007/03/14 14:03 |

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|     |       |  |                              |    |     |                  |
|-----|-------|--|------------------------------|----|-----|------------------|
| S6  | 262   | 156/345.17 156/345.18 156/345.37<br>134/106  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 12:23 |
| S7  | 35    | ("3834083"   "3900866"   "4113492"  <br>"4314022"   "4393807"   "4510176"  <br>"4518678"   "4557785"   "4576796"  <br>"4611553"   "4668334"   "4685975"  <br>"4732785"   "4790262"   "4838979"  <br>"4886728"   "4899685"   "5013586"  <br>"5103102"   "5151219"   "5178989"  <br>"5238713"   "5279926"   "5289222"  <br>"5294257"   "5358740"   "5362608"  <br>"5378511"   "5444921"   "5474807"  <br>"5580607"   "5608943"   "5705223"  <br>"5759427"   "5952050").PN. OR<br>("6793764").URPN. | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 12:37 |
| S8  | 20    | "5103102"  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 12:41 |
| S9  | 2026  | 438/745  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 12:41 |
| S10 | 813   | S9 and heat\$3   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 12:41 |
| S11 | 3     | ("20020067400"   "6365531"  <br>"6599582").PN. OR ("6977222").URPN.  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 13:11 |
| S12 | 717   | 261/142  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 13:12 |
| S13 | 122   | S12 and (wafer semiconductor<br>substrate)   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 13:14 |
| S14 | 60    | S13 and (suc\$3 vacuum)  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 13:17 |
| S15 | 1530  | muffle and (wafer semiconductor<br>substrate)  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 13:17 |
| S16 | 594   | (muffle with (heat\$3 thermal)) and<br>(wafer semiconductor substrate)   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 13:24 |
| S17 | 18967 | (heat\$3 same ((vacuum suc\$3) with<br>(fluid supply liquid gas))) and (wafer<br>semiconductor substrate)  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 13:25 |
| S18 | 8341  | (heat\$3 same ((vacuum suc\$3) with<br>(fluid supply liquid gas))) same (wafer<br>semiconductor substrate)   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/05/15 13:25 |

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|     |      |   |                        |    |     |                  |
|-----|------|---|------------------------|----|-----|------------------|
| S19 | 3812 | (heat\$3 with((vacuum suc\$3) with (fluid supply liquid gas))) same (wafer semiconductor substrate)   | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/05/15 13:25 |
| S20 | 2538 | (heat\$3 with((vacuum suc\$3) with (fluid supply liquid gas))) with (wafer semiconductor substrate)   | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/05/15 13:26 |
| S21 | 850  | (heat\$3 with((vacuum suc\$3) with (fluid supply liquid gas))) with (wafer semiconductor)   | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/05/15 13:26 |
| S22 | 7    | (("4,838,289") or ("5,271,774") or ("5,705,223") or ("5,945,351") or ("5,997,653") or ("6,398,975") or ("6,491,764")).PN.   | USPAT                  | OR | OFF | 2006/05/15 14:03 |
| S23 | 33   | (("3,953,265") or ("4,086,870") or ("4,444,492") or ("4,838,289") or ("5,102,494") or ("5,180,431") or ("5,271,774") or ("5,294,257") or ("5,343,234") or ("5,660,642") or ("5,705,223") or ("5,807,522") or ("5,830,334") or ("5,882,433") or ("5,893,004") or ("5,945,351") or ("5,975,098") or ("5,989,478") or ("5,997,653") or ("6,108,932") or ("6,132,586") or ("6,230,722") or ("6,341,998") or ("6,391,166") or ("6,398,975") or ("6,417,117") or ("6,474,786") or ("6,488,040") or ("6,491,764") or ("6,514,570") or ("6,530,823") or ("6,531,206") or ("6,616,772")).PN. or ((2002/0007869) or (2002/0051644) or (2002/0121290) or (2002/0125212) or (2003/0091745) or (2003/0092264) or (2003/0138968) or (2004/0060573) or (2004/0060581) or (2004/0069319) or (2004/0069326) or (2004/0178060) or (2004/0182422) or (2005/0148197)).CCLS. | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:11 |
| S24 | 0    | ((2002/0007869) or (2002/0051644) or (2002/0121290) or (2002/0125212) or (2003/0091745) or (2003/0092264) or (2003/0138968) or (2004/0060573) or (2004/0060581) or (2004/0069319) or (2004/0069326) or (2004/0178060) or (2004/0182422) or (2005/0148197)).CCLS.  | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:07 |
| S25 | 9    | "2002/0007869" "2002/0051644"<br>"2002/0121290" "2002/0125212"<br>"2003/0091745" "2003/0092264"<br>"2003/0138968" "2004/0060573"<br>"2004/0060581" "2004/0069319"<br>"2004/0069326" "2004/0178060"<br>"2004/0182422" "2005/0148197"   | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:09 |

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|     |      |  |                        |    |     |                  |
|-----|------|--|------------------------|----|-----|------------------|
| S26 | 57   | ("3437543"   "3489608"   "3597289"   "3765984"   "3841930"   "3874959").PN. OR ("3953265").URPN. | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/05/15 14:13 |
| S27 | 3644 | proximity adj4 head  | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:18 |
| S28 | 100  | S27 same (wafer semiconductor)   | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:18 |
| S29 | 115  | (proximity adj4 head) with (heat\$3)   | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:24 |
| S30 | 2    | S29 same (wafer semiconductor)   | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:18 |
| S31 | 0    | "9916109".ipc.   | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:24 |
| S32 | 7    | "99/16109"   | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:29 |
| S33 | 6    | "0232825"  | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:29 |
| S34 | 1    | "03014416"   | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:29 |
| S35 | 7    | "022280330" "02309638" "11350169"  | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:29 |
| S36 | 11   | S7 AND HEAT\$3   | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:28 |
| S37 | 0    | S35 AND HEAT\$3  | US-PGPUB; USPAT        | OR | OFF | 2006/05/15 14:28 |
| S38 | 0    | "99/16109"   | EPO; JPO; DERWENT      | OR | OFF | 2006/05/15 14:29 |
| S39 | 17   | "0232825"  | EPO; JPO; DERWENT      | OR | OFF | 2006/05/15 14:29 |
| S40 | 1    | "03014416"   | EPO; JPO; DERWENT      | OR | OFF | 2006/05/15 14:29 |
| S41 | 6    | "022280330" "02309638" "11350169"  | EPO; JPO; DERWENT      | OR | OFF | 2006/05/15 14:29 |
| S42 | 24   | S39 S40 S41  | EPO; JPO; DERWENT      | OR | OFF | 2006/05/15 14:29 |
| S43 | 0    | "10737766"   | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/07/11 11:21 |
| S44 | 1    | "10/737766"  | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/07/11 12:42 |
| S45 | 228  | 156/345.11   | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/07/11 12:48 |

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|     |       |   |                              |    |     |                  |
|-----|-------|---|------------------------------|----|-----|------------------|
| S46 | 54849 | electroplat\$3  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/07/11 12:48 |
| S47 | 21548 | S46 and (wafer semiconductor)   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/07/11 12:48 |
| S48 | 9672  | S47 and (concentric\$3 inner outer)   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/07/11 12:48 |
| S49 | 7     | "5756155"   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 13:55 |
| S50 | 13    | ("3870089"   "4093123"   "4606382"   "4832752"   "5147087"   "5250114"   "5255720").PN. OR ("5756155").URPN.                          | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 13:57 |
| S51 | 1135  | (proximity adj head)  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 13:57 |
| S52 | 28    | S51 with heat\$3  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:00 |
| S53 | 26    | (mikhaylichenko delarios).in.   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:06 |
| S54 | 2562  | (head with heat\$3) same (semiconductor wafer)  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:07 |
| S55 | 156   | (head with heat\$3) same (semiconductor wafer) same (sens\$3 monitor\$3 detect\$3) with ((temperature) or (thermocouple thermometer)) | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:16 |
| S56 | 154   | (head with heat\$3) same (semiconductor wafer) same (sens\$3 monitor\$3 detect\$3) with (temperature)                                 | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:17 |
| S57 | 26    | (showerhead with heat\$3) same (semiconductor wafer) same (sens\$3 monitor\$3 detect\$3) with (temperature)                           | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:17 |
| S58 | 1     | ("proximity head" with heat\$3) same (semiconductor wafer) same (sens\$3 monitor\$3 detect\$3) with (temperature)                     | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:18 |
| S59 | 180   | S56 S57 S58   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:28 |

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|     |      |  |                              |    |     |                  |
|-----|------|--|------------------------------|----|-----|------------------|
| S60 | 1756 | 134/135 134/90 134/105   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:29 |
| S61 | 542  | S60 and (wafer\$1 semiconductor\$1)  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:35 |
| S62 | 390  | S60 and (wafer\$1 semiconductor\$1) and (thermometer thermocouple thermistor temperature)  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:52 |
| S63 | 1005 | 118/401 118/302  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 14:53 |
| S64 | 374  | S63 and (heat\$3) same (temperature thermometer thermocouple thermistor)   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 15:54 |
| S65 | 30   | S63 and (heat\$3) same (thermometer thermocouple thermistor)   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 15:55 |
| S66 | 56   | (showerhead "shower head" "proximity head" distribut\$3 nozzle\$1 dispers\$3 diffus\$3) with (heat\$3) with (thermometer thermocouple thermistor) same (semiconductor wafer) | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/03/14 15:59 |
| S67 | 46   | (showerhead "shower head" "proximity head" distribut\$3 nozzle\$1 dispers\$3 diffus\$3) with (heat\$3) with (thermometer thermocouple thermistor) same (semiconductor wafer) | EPO; JPO;<br>DERWENT         | OR | OFF | 2007/03/14 16:00 |

dispers\$3  
 showerhead  
 same  
 (heat\$3)  
 with  
 (thermometer  
 thermocouple  
 thermistor)  
 dispers\$3  
 nozzle\$1  
 distribut\$3  
 proximity head  
 showerhead